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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/920,682	08/02/2001	Lands J. Stewart JR.		5757

24919 7590 09/21/2005

MCAFEE & TAFT
TENTH FLOOR, TWO LEADERSHIP SQUARE
211 NORTH ROBINSON
OKLAHOMA CITY, OK 73102

EXAMINER

KYLE, MICHAEL J

ART UNIT	PAPER NUMBER
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3677

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/920,682

Applicant(s)

STEWART, LANDS J.

Examiner

Michael J. Kyle

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6,9-12,14-16,19,22-24,32,33 and 35-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-11,22,23,32,33 and 35-43 is/are allowed.
- 6) ☒ Claim(s) 1-3,6,12,14-16,19 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKee in view of Klein et al ("Klein", U.S. Patent No. 5,370,404). McKee discloses a seal for use adjacent to a rotating surface (12) comprising a ring (56) having a sealing surface (68) sealing between a portion of the stationary surface (48) and the sealing surface. The ring (56) is spaced from the rotating surface and has a race engagement surface (72) separate from the sealing surface. McKee also discloses a first race (16), a second race (38 or 40), and a plurality of bearing elements (34). While McKee describes features 56 and 58 as being cushioning elements, examiner notes this structure inherently provides a sealing function. For this reason, examiner considers 56 and 58 to be seals. McKee fails to disclose a metal-to-metal seal.

3. Klein teaches a sealing arrangement (4) between stationary surface and sealing surface. The seal provides a metal-to-metal seal (at 17, against 2). Ring 17 ensures reliable fixation of the seal arrangement within the bore, and creates a friction bond between the ring 17 and wall 2. Examiner considers this friction bond to be a seal. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify McKee as taught by Klein, such that McKee's seal 56 includes metal reinforcement ring (17 of Klein) to ensure reliable fixation of the seal arrangement within the bore (Klein, column 4, lines 39-43).

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4. With respect to claims 2 and 3, McKee discloses a bearing cage (36) disposed between first and second races, defining bearing openings. The bearing elements (34) are disposed in the openings. McKee also discloses the sealing surface (68) to be an outer peripheral surface of the ring.

5. With respect to claim 14, McKee discloses a stationary housing (48) having a sealing surface, a rotor assembly (12), a ring (56) having a sealing surface (68) sealing along a portion of the housing sealing surface and spaced from the rotor, having a bearing race engagement surface (72) separate from the ring sealing surface. McKee also discloses a first bearing race (16) engaging a portion of the rotor (12), a second bearing race (38 or 40) engaging the race engagement surface, and a bearing cage (36) defining a plurality of bearing openings disposed between the first and second bearing races. A plurality of bearing elements (34) are disposed in the bearing openings. McKee fails to disclose a metal-to-metal seal.

6. Klein teaches a sealing arrangement (4) between stationary surface and sealing surface. The seal provides a metal-to-metal seal (at 17, against 2). Ring 17 ensures reliable fixation of the seal arrangement within the bore, and creates a friction bond between the ring 17 and wall 2. Examiner considers this friction bond to be a seal. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify McKee as taught by Klein, such that McKee's seal 56 includes metal reinforcement ring (17 of Klein) to ensure reliable fixation of the seal arrangement within the bore (Klein, column 4, lines 39-43).

7. With respect to claims 15 and 16, the housing sealing surface is substantially cylindrical and the ring sealing surface (68) is substantially concentric with the housing sealing surface. McKee also discloses the ring sealing surface (68) to be an outer peripheral surface of the ring.

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8. Claims 12 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKee in view Klein, as applied to claims 1 and 14 above, and in further view of Ide (U.S. Patent No. 5,425,584). McKee and Klein disclose the bearings to be balls, not rollers, as claimed.

9. Ide teaches a bearing assembly that uses conventional rolling element bearing components and rolling elements, such as balls or rollers (column 9, lines 24-29), thereby establishing ball bearing and roller bearing as an art recognized equivalent, as either can be used and still allow for proper functioning of the machine they are used in. It would have been obvious to one having ordinary skill in the art at the time of the invention to use either ball or roller bearings in McKee, as taught by Ide, as they are equivalent in the art.

10. Claims 6 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKee in view Ide (U.S. Patent No. 5,425,584). McKee discloses the bearings to be balls, not rollers, as claimed.

11. Ide teaches a bearing assembly that uses conventional rolling element bearing components and rolling elements, such as balls or rollers (column 9, lines 24-29), thereby establishing ball bearing and roller bearing as an art recognized equivalent, as either can be used and still allow for proper functioning of the machine they are used in. It would have been obvious to one having ordinary skill in the art at the time of the invention to use either ball or roller bearings in McKee, as taught by Ide, as they are equivalent in the art.

Allowable Subject Matter

12. Claims 9-11, 22, 23, 32, 33, 35-43 are allowed.

Response to Arguments

13. Applicant's arguments filed June 30, 2005 have been fully considered but they are not persuasive. On page 14 of the remarks, applicant argues that no mention is made of elements 56 and 58 in McKee being seals. Applicant states that dampening vibration alone does not make the elements capable of sealing. While this is true, examiner asserts the elements are capable of sealing. The elements are elastomeric elements that are pressed into face-to-face contact with the surrounding housing. This structural characteristic is common of many face seals well known with in the art. Examiner asserts the contact between the elements 56, 58 and surround structure will at least partially prevent movement of fluid therethrough. For this reason, examiner considers these elements to be seals.

14. Also on page 14, applicant states that sealing is not mentioned as a characteristic of reinforcement ring 17 in Klein. Similar to the reasons stated above, examiner considers this ring 17 to be seal because it the ring 17 will at least partially prevent passage of fluid between itself and the housing structure. If the ring 17 was spaced apart or not in contact with the housing, then it could not be said that the ring 17 is seal. However, Klein discloses there is a friction bond between the ring 17 and housing, or wall 2. This friction bond will inherently provide a degree of sealing.

15. On page 15, applicant argues that McKee teaches away from metal-to-metal contact because there would be nothing to absorb or dampen vibration, as the elements 56 and 58 are intended to do. Examiner respectfully disagrees. The result of the combination of McKee and Klein would not eliminate elements 56 and 58 of McKee, rather, it would add a ring (as taught

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by Klein around the periphery of the elements. The elements 56 and 59 would still absorb and dampen vibrations. The reliable fixation taught by Klein, as a result of the ring 17, would prevent the elements 56 and 58 in McKee from becoming displaced or significantly deformed.

16. Applicant's arguments regarding the combination with the Ide patent rely on the alleged allowability of the claim rejected by the combination McKee and Klein. As addressed above, this rejection is maintained; therefore these arguments are not persuasive.

Conclusion

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

18. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

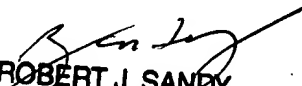
19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Kyle whose telephone number is 571-272-7057. The examiner can normally be reached on Monday - Friday, 8:30 am - 5:00 pm.

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20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

21. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mk


ROBERT J. SANDY
PRIMARY EXAMINER